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FOLDING OF A PROTECTIVE COVER ARTICLE

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FOLDING OF A PROTECTIVE COVER ARTICLE

CROSS-REFERENCE TO RELATED APPLICATION

This application claims the benefit of U.S. Provisional Application No. 60/448,932, filed February 21, 2003.

FIELD OF INVENTION

The present invention relates to a method of folding. More particularly, the present invention relates to a method of folding a protective cover article, the method of folding resulting in a compact article that is relatively easy to unfold.

BACKGROUND

Conventional methods for the folding of protective cover articles typically result in folded articles that are cumbersome and unwieldy. Specifically, such conventionally folded protective cover articles are relatively large, bulky and/or difficult to unfold.

Protective cover articles usually are relatively large or bulky even when folded. Users, therefore, may perceive such articles as occupying an inordinate amount of space in a carrying bag. Despite these perceptions, protective cover articles are not folded to smaller dimensions because of the concomitant difficulty a user encounters in the unfolding of any such article. Where a protective cover article, such as a changing pad, is folded to smaller dimensions the pad may be too cumbersome to easily unfold completely and may thus provide inadequate coverage of the appointed changing area. The difficulty in the unfolding of a changing pad may be exacerbated by the user trying to unfold a pad with one hand while holding a squirming infant in need of changing with the other hand.

As a result, there has remained a need for a method of folding a protective cover article that provides a relatively compact folded article. Moreover, there has remained a need for a method of folding a protective cover article that provides a folded article that is relatively easy to unfold.

SUMMARY

The present inventors have recognized the difficulties and problems inherent in the folding of protective cover articles. In response thereto, the present inventors
5 conducted intensive research into the folding of protective cover articles. Protective cover articles folded according to the methods herein are believed to result in folded protective cover articles that are not only relatively compact, but also relatively easier to unfold, particularly by a user that has only one hand available to unfold the article.

DRAWINGS

The foregoing and other features, aspects and advantages of the present invention will become better understood with regard to the following description, appended claims and accompanying drawings where:

FIG. 1 illustrates a top plan view of a protective cover article in an unfolded
15 condition.

FIG. 2 illustrates a side view of the article of FIG. 1, when viewed from a transverse edge.

FIG. 3 illustrates a protective cover article having a number of folds in an accordion-like manner.

20 FIG. 4 illustrates a top plan view of a partially folded protective cover article.

FIG. 5 illustrates a side view of the partially folded article of FIG. 4.

FIG. 6 illustrates a folding of the first and second longitudinal edges inward toward the intermediate first surface.

FIG. 7 illustrates a further folding of an article in an accordion-like manner,
25 each of the transversely extending accordion-like folds being inboard of the transversely extending folds formed by folding the first and second longitudinal edges inward toward the intermediate upper surface as illustrated in FIG. 6.

FIG. 8 illustrates the protective cover article of FIG. 7 in a folded configuration.

30 FIG. 9 illustrates the further folding of a partially-folded protective cover article, by forming an odd number of transversely extending folds in an accordion-like manner.

FIG. 10 illustrates the protective cover article of FIG. 9 in a folded configuration.

FIG. 11 illustrates an expanded view of a folded protective cover article similar to that of FIG. 8.

FIG. 12 illustrates an expanded view of a folded protective cover article similar to that of FIG. 10.

5 FIG. 13 illustrates a top plan view of an outer panel of a folded protective cover articles.

FIG. 14 illustrates a top plan view of another version of a protective cover article in an unfolded condition.

10 FIG. 15 illustrates a top plan view of an alternate version of a protective cover article in an unfolded condition.

FIG. 16 illustrates a top plan view of yet another version of a protective cover article in an unfolded condition.

FIG. 17 illustrates a top plan view of an alternative version of a protective cover article in an unfolded condition.

15 FIG. 18 illustrates a top plan view of an outer panel having a finger placement indicator.

FIG. 19 illustrates a top plan view of an outer panel having an alternate finger placement indicator.

FIG. 20 illustrates a cross-sectional view of FIG. 19 taken along line 20-20.

20 FIG. 21 illustrates a top plan view of an outer panel having another alternative finger placement indicator.

FIG. 22 illustrates a top plan view of an outer panel having yet another alternate finger placement indicator.

25 FIG. 23 illustrates a cross-sectional view of FIG. 22 taken along line 23-23,

DESCRIPTION

The present invention relates to methods of folding protective cover articles (30). While the various versions of the present invention are described in terms of a protective cover article (30) such as a changing pad, the invention is equally applicable to other protective cover articles such as blankets, tablecloths, beach towels, rugs, floor mats, placemats, surgical drapes, surgical gowns, and the like.

Referring now to the drawings, FIG. 1 illustrates a protective cover article such as a changing pad (30) in an unfolded condition. In its unfolded condition, as illustrated in FIGs. 1 and 2, the changing pad (30) has an initial upper surface (32), an

initial lower surface (34), a longitudinal centerline (36), a transverse centerline (38), opposing first (40) and second (42) longitudinal edges, and opposing first (44) and second (46) transverse edges.

The changing pad (30) may be suitably folded by forming a number of
5 longitudinally extending folds in an accordion-like manner. For clarification purposes, FIG. 3 illustrates a protective cover article (30) having a number of folds in an accordion-like manner. The number of longitudinally extending folds is typically greater than one. Desirably, the number of longitudinally extending folds is an even number greater than one. The longitudinally extending folds run in a direction
10 generally parallel to the longitudinal centerline (36) of the changing pad (30). Moreover, the longitudinally extending folds may be spaced substantially equally between the longitudinal edges (40, 42) or unequally between the longitudinal edges (40, 42). As illustrated in FIGs. 4 and 5, the resulting partially-folded changing pad (48) has an intermediate first surface (50) and an intermediate second surface (52).
15 After forming the partially-folded changing pad (48), an even number of transversely extending folds are formed. Typically, the even number of transversely extending folds is greater than 3. Referring now to FIG. 6, two of the transversely extending folds are formed by folding the first (44) and second (46) transverse edges inward toward the intermediate first surface (50) of the partially folded changing pad (48).
20 These two folds are positioned slightly inward from each transverse edge (44, 46) toward the transverse centerline (38). Thereafter, the partially folded changing pad (48) is folded in an accordion-like manner similar to that which is illustrated in FIG. 7, each of these transversely extending accordion-like folds being inboard (*i.e.*, a direction moving from a transverse edge (44, 46) toward the transverse centerline (38))
25 of the transversely extending folds formed by folding the first (44) and second (46) transverse edges inward toward the intermediate first surface (50). The transversely extending folds run in a direction generally parallel to the transverse centerline (38). In addition, the transversely extending folds may be spaced substantially equally between the transverse edges (44, 46) or unequally between the transverse edges (44,
30 46). As illustrated in FIGs. 7, 8 and 11, the folded changing pad (58) has a first outer panel (54) and a second outer panel (56). Referring to FIGs. 11 and 13, each outer panel (54, 56) typically has a major surface (60), a minor surface (62), and a periphery (64).

A changing pad (30) may also be folded in another manner. In this instance, the changing pad (30) may suitably be folded by forming a number of longitudinally extending folds in an accordion-like manner. Reference is made to FIG. 3 which illustrates a protective cover article (30) having a number of folds in an accordion-like manner. The number of longitudinally extending folds is typically greater than one. Desirably, the number of longitudinally extending folds is an even number greater than one. The longitudinally extending folds run in a direction generally parallel to the longitudinal centerline (36) of the changing pad (30). Moreover, the longitudinally extending folds may be spaced substantially equally between the longitudinal edges (40, 42) or unequally between the longitudinal edges (40, 42). As illustrated in FIGs. 4 and 5, the resulting partially-folded changing pad (48) has an intermediate first surface (50) and an intermediate second surface (52). After forming the partially-folded changing pad (48), an odd number of transversely extending folds are formed in an accordion like manner similar to that which is illustrated in FIG. 9. Typically, the odd number of transversely extending folds is greater than 4. The transversely extending folds run in a direction generally parallel to the transverse centerline (38). In addition, the transversely extending folds may be spaced substantially equally between the transverse edges (44, 46) or unequally between the transverse edges (44, 46). As illustrated in FIGs. 9, 10 and 12, the resulting folded changing pad (58) has a first outer panel (54) and a second outer panel (56). Referring to FIGs. 12 and 13, each outer panel (54, 56) typically has a major surface (60), a minor surface (62), and a periphery (64).

In a particular method, a changing pad (30) is folded to a discrete and compact size that is relatively easy to unfold. The unfolded changing pad (30) has an initial upper surface (32), an initial lower surface (34), a longitudinal centerline (36), a transverse centerline (38), opposing first (40) and second (42) longitudinal edges, and opposing first (44) and second (46) transverse edges. The changing pad (30) is folded by forming four longitudinally extending folds in an accordion-like manner. For purposes of clarity, FIG. 3 illustrates a protective cover article (30) having a number of folds in an accordion-like manner. The longitudinally extending folds run in a direction generally parallel to the longitudinal centerline (36) of the changing pad (30). The longitudinally extending folds are substantially equally spaced between opposing first (40) and second (42) longitudinal edges. The resulting partially-folded changing pad (48) has an intermediate first surface (50) and an intermediate second surface (52).

Thereafter, four transversely extending folds are formed, the transversely extending folds being substantially equally spaced between opposing first (44) and second (46) transverse edges. Referring now to FIG. 6, two of the transversely extending folds are formed by folding the first (44) and second (46) transverse edges inward toward the intermediate first surface (50) of the partially-folded changing pad (48). These two folds are positioned slightly inward from each transverse edge (44, 46) toward the transverse centerline (38). Thereafter the partially folded changing pad (48) is folded in an accordion-like manner similar to that which is illustrated in FIG. 7, each of these two transversely extending accordion-like folds being inboard (*i.e.*, a direction moving from a transverse edge (44, 46) toward the transverse centerline (38)) of the transversely extending folds formed by folding the first (44) and second (46) transverse edges inward toward the intermediate first surface (50). The transversely extending folds run in a direction generally parallel to the transverse centerline (38). The folded changing pad (58) has a first outer panel (54) and a second outer panel (56). Each outer panel (54, 56) typically has a major surface (60), a minor surface (62), and a periphery (64).

Protective cover articles (30) suitable for folding according to the methods of the present invention typically have a longitudinal length, measured along a line laying generally parallel to the longitudinal centerline (36), of no less than about 100; alternatively, no less than about 125; alternatively, no less than about 150; alternatively, no less than about 175; alternatively, no less than about 200; alternatively, no less than about 225; alternatively, no less than about 250; alternatively, no less than about 275; alternatively, no less than about 300; alternatively, no less than about 350; alternatively, no less than about 400; alternatively, no less than about 450; alternatively, no less than about 500; alternatively, no less than about 550; alternatively, no less than about 600; alternatively, no less than about 650; alternatively, no less than about 700; alternatively, no less than about 800; alternatively, no less than about 900; alternatively, no less than about 1,000; alternatively, no less than about 1,100; alternatively, no less than about 1,150; alternatively, no less than about 1,200; alternatively, no less than about 1,250; alternatively, no less than about 1,300; alternatively, no less than about 1,350; alternatively, no less than about 1,400; alternatively, no less than about 1,450; alternatively, no less than about 1,500; alternatively, no less than about 1,525; alternatively, no less than about 1,575; and

finally, alternatively, no less than about 1,600 mm. In addition, protective cover articles (30) suitable for folding according to the methods of the present invention typically have a longitudinal length, measured along a line also laying generally parallel to the longitudinal centerline (38), of no greater than about 1,700; alternatively, no greater than about 1,675; alternatively, no greater than about 1,650; alternatively, no greater than about 1,625; alternatively, no greater than about 1,600; alternatively, no greater than about 1,575; alternatively, no greater than about 1,550; alternatively, no greater than about 1,525; alternatively, no greater than about 1,500; alternatively, no greater than about 1,450; alternatively, no greater than about 1,400; alternatively, no greater than about 1,350; alternatively, no greater than about 1,300; alternatively, no greater than about 1,250; alternatively, no greater than about 1,200; alternatively, no greater than about 1,150; alternatively, no greater than about 1,100; alternatively, no greater than about 1,000; alternatively, no greater than about 900; alternatively, no greater than about 800; alternatively, no greater than about 700; alternatively, no greater than about 650; alternatively, no greater than about 600; alternatively, no greater than about 550; alternatively, no greater than about 500; alternatively, no greater than about 450; alternatively, no greater than about 400; alternatively, no greater than about 350; alternatively, no greater than about 300; alternatively, no greater than about 275; alternatively, no greater than about 250; alternatively, no greater than about 225; alternatively, no greater than about 200; alternatively, no greater than about 175; alternatively, no greater than about 150; and finally, alternatively, no greater than about 125 mm. Thus, the protective cover article (30) may have a longitudinal length ranging between no less than about 100 mm up to no greater than about 1,700 mm; although the approximate longitudinal length of the protective cover article may vary according to, *inter alia*, the general design and intended use of the protective cover article.

Protective cover articles (30) suitable for folding according to the methods of the present invention typically have a transverse width, measured along a line laying generally parallel to the transverse centerline (38), of no less than about 100; alternatively, no less than about 125; alternatively, no less than about 150; alternatively, no less than about 175; alternatively, no less than about 200; alternatively, no less than about 225; alternatively, no less than about 250; alternatively, no less than about 275; alternatively, no less than about 300; alternatively, no less than about 350; alternatively, no less than about 400;

alternatively, no less than about 450; alternatively, no less than about 500; alternatively, no less than about 550; alternatively, no less than about 600; alternatively, no less than about 650; alternatively, no less than about 700; alternatively, no less than about 800; alternatively, no less than about 900;

5 alternatively, no less than about 1,000; alternatively, no less than about 1,100; alternatively, no less than about 1,150; alternatively, no less than about 1,200; alternatively, no less than about 1,250; alternatively, no less than about 1,300; alternatively, no less than about 1,350; alternatively, no less than about 1,400; alternatively, no less than about 1,450; alternatively, no less than about 1,500;

10 alternatively, no less than about 1,525; alternatively, no less than about 1,575; and finally, alternatively, no less than about 1,600 mm. In addition, protective cover articles (30) suitable for folding according to the methods of the present invention typically have a transverse width, measured along a line also laying generally parallel to the transverse centerline (38), of no greater than about 1,700; alternatively, no

15 greater than about 1,675; alternatively, no greater than about 1,650; alternatively, no greater than about 1,625; alternatively, no greater than about 1,600; alternatively, no greater than about 1,575; alternatively, no greater than about 1,550; alternatively, no greater than about 1,525; alternatively, no greater than about 1,500; alternatively, no greater than about 1,450; alternatively, no greater than about 1,400; alternatively, no

20 greater than about 1,350; alternatively, no greater than about 1,300; alternatively, no greater than about 1,250; alternatively, no greater than about 1,200; alternatively, no greater than about 1,150; alternatively, no greater than about 1,100; alternatively, no greater than about 1,000; alternatively, no greater than about 900; alternatively, no greater than about 800; alternatively, no greater than about 700; alternatively, no

25 greater than about 650; alternatively, no greater than about 600; alternatively, no greater than about 550; alternatively, no greater than about 500; alternatively, no greater than about 450; alternatively, no greater than about 400; alternatively, no greater than about 350; alternatively, no greater than about 300; alternatively, no greater than about 275; alternatively, no greater than about 250; alternatively, no

30 greater than about 225; alternatively, no greater than about 200; alternatively, no greater than about 175; alternatively, no greater than about 150; and finally, alternatively, no greater than about 125 mm. Thus, the protective cover article (30) may have a transverse width ranging between no less than about 100 mm up to no greater than about 1,700 mm; although the approximate transverse width of the

protective cover article may vary according to, *inter alia*, the general design and intended use of the protective cover article.

Due to the variety of configurations suitable for being folded according to the methods described herein, the dimensions of protective cover articles (30) may alternatively be described in terms of open area. Open area, as used herein, is intended to be reflective of the area defined by the perimeter or periphery of an unfolded or open protective cover article (30). Suitable protective cover articles (30) have an open area of no less than about 1; alternatively, no less than about 10; alternatively, no less than about 20; alternatively, no less than about 30; alternatively, no less than about 40; alternatively, no less than about 50; alternatively, no less than about 60; alternatively, no less than about 70; alternatively, no less than about 80; alternatively, no less than about 90; alternatively, no less than about 100; alternatively, no less than about 120; alternatively, no less than about 140; alternatively, no less than about 150; alternatively, no less than about 160; alternatively, no less than about 180; alternatively, no less than about 200; alternatively, no less than about 210; alternatively, no less than about 220; alternatively, no less than about 230; alternatively, no less than about 240; alternatively, no less than about 250; alternatively, no less than about 260; alternatively, no less than about 270; and finally, alternatively, no less than about 280 square decimeters. In addition, protective cover articles (30) suitable for folding according to the methods of the present invention typically have an open area of no greater than about 290; alternatively, no greater than about 280; alternatively, no greater than about 270; alternatively, no greater than about 260; alternatively, no greater than about 250; alternatively, no greater than about 240; alternatively, no greater than about 230; alternatively, no greater than about 220; alternatively, no greater than about 210; alternatively, no greater than about 200; alternatively, no greater than about 180; alternatively, no greater than about 160; alternatively, no greater than about 150; alternatively, no greater than about 140; alternatively, no greater than about 120; alternatively, no greater than about 100; alternatively, no greater than about 90; alternatively, no greater than about 80; alternatively, no greater than about 70; alternatively, no greater than about 60; alternatively, no greater than about 50; alternatively, no greater than about 40; alternatively, no greater than about 30; alternatively, no greater than about 20; and finally, alternatively, no greater than about square decimeters. Thus, the protective cover article (30) may have an open area ranging between no less than about 1 square

decimeter up to no more than about 290 square decimeters; although the approximate open area of the protective cover article may vary according to, *inter alia*, the general design and intended use of the protective cover article.

Protective cover articles (30) suitable for folding according to the methods of the present invention also typically have a desired basis weight. For example, basis weights of protective cover articles (30) suitable for folding according to the present invention are typically no less than about 30; alternatively, no less than about 40; alternatively, no less than about 50; alternatively, no less than about 75; alternatively, no less than about 100; alternatively, no less than about 125; alternatively, no less than about 150; alternatively, no less than about 175; alternatively, no less than about 200; alternatively, no less than about 225; alternatively, no less than about 250; and finally, alternatively, no less than about 275 gsm. Moreover, basis weights of protective cover articles suitable for folding according to the methods of the present invention are typically no greater than about 300; alternatively, no greater than about 275; alternatively, no greater than about 250; alternatively, no greater than about 225; alternatively, no greater than about 200; alternatively, no greater than about 175; alternatively, no greater than about 150; alternatively, no greater than about 125; alternatively, no greater than about 100; alternatively, no greater than about 75; alternatively, no greater than about 50; and finally, alternatively, no greater than about 40 gsm. Consequently, the protective cover articles (30) may have a basis weight ranging between no less than about 30 gsm up to no greater than about 300 gsm; although the approximate basis weight of the protective cover article may vary according to, *inter alia*, the general design and intended use of the protective cover article.

Protective cover articles (30) suitable for folding according to the present invention generally exhibit a drape stiffness that allows the articles to be folded into a relatively compact folded article, yet be relatively easy to unfold. Suitable protective cover articles (30) generally exhibit a drape stiffness of no less than 2; alternatively, no less than 2.5; alternatively, no less than 3; alternatively, no less than 3.5; alternatively, no less than 4; alternatively, no less than 4.5; alternatively, no less than 5; alternatively, no less than 5.5; alternatively, no less than 6; alternatively, no less than 6.5; alternatively, no less than 7; alternatively, no less than 7.5; alternatively, no less than 8; alternatively, no less than 8.5; alternatively, no less than 9; and finally, alternatively, no less than 9.5 cm. In addition, the drape stiffness of protective cover

articles (30) suitable for folding according to the methods of the present invention are typically no greater than 10; alternatively no greater than 9.5; alternatively, no greater than 9; alternatively, no greater than 8.5; alternatively, no greater than 8; alternatively, no greater than 7.5; alternatively, no greater than 7; alternatively, no greater than 6.5; alternatively, no greater than 6; alternatively, no greater than 5.5; alternatively, no greater than 5; alternatively, no greater than 4.5; alternatively, no greater than 4; alternatively, no greater than 3.5; alternatively, no greater than 3.0; and finally, alternatively, no greater than 2.5 cm. Consequently, the protective cover articles (30) may have a drape stiffness ranging between no less than 2 cm up to no greater than 10 cm; although the approximate drape stiffness of the protective cover article may vary according to, *inter alia*, the general design and intended use of the protective cover article. A method for determining the drape stiffness of protective cover articles (30) suitable for folding according to the present invention is set forth hereinafter in the Test Methods section.

A particular embodiment of a protective cover article suitable for folding according to the methods of the present invention may be in the form of a changing pad (30) formed by any of a number of manufacturing methods (*e.g.*, by hand, by machine, *etc.*) known to those skilled in the art. Such a changing pad (30) may include a film layer and an absorbent layer joined together using a hot melt adhesive applied in a swirl pattern. A suitable film layer may be provided by a liquid impermeable polyethylene film having a thickness of at least about 1.0 mil and a basis weight of about 45 gsm. One such suitable film may be obtained from Pliant Corporation, a business having an office in Chippewa Falls, Wisconsin, USA, under the designation XC2-22-1645.3. The absorbent may be a double creped (DRC) fibrous web as disclosed in U.S. Patent No. 5,674,590, issued October 7, 1997, to *Anderson et al.*, the entirety of which is hereby incorporated herein by reference to the extent that such disclosure is consistent (*i.e.*, not in conflict) herewith. In a particular aspect, the absorbent layer may be a DRC having a basis weight of about 86 gsm. An acceptable hot melt adhesive for joining together the film layer and absorbent layer may be obtained from Findley Adhesive, a business having an office in Durham, North Carolina, USA, under the designation H2525a, and may be applied at a basis weight of about 1.6 gsm. A changing pad so formed desirably has a thickness ranging between about 0.8 and about 1.2 mm.

Optionally, the changing pads (30) folded according to the present invention include at least one finger placement indicator (70) suitable for use by a consumer to easily unfold a folded changing pad (58). Referring now to FIGs. 18 through 23, the finger placement indicator (70) is typically situated on or located adjacent to a portion of a surface (60, 62) of an outer panel (54, 56) of a folded changing pad (58). Finger placement indicators suitable for use with the folded changing pads (58) of the present invention allow a user to engage the finger placement indicator (70) typically with a finger and thumb of one hand and unfold a folded changing pad (58) solely using that one hand if desired. In one instance, the finger placement indicator (70) may be indicia printed or scored upon a portion of a surface (60, 62) of an outer panel (54, 56) of a folded changing pad (58), in a manner similar to that which is illustrated in FIG. 18. Alternatively, the finger placement indicator (70) may be defined by a piece of material situated on a portion of a surface (60, 62) of an outer panel (54, 56) of a folded changing pad (58).

For example, the finger placement indicator (70) may be a strip (72) of material having a length, a width and opposing ends, similar to that which is illustrated in FIGs. 19, 20, 22 and 23. The strip may be positioned on a portion of a surface (60, 62) of an outer panel (54, 56) of a folded changing pad (58). The strip (72) is typically positioned such that its length runs substantially parallel to a centerline (*i.e.*, the longitudinal centerline (36) or the transverse centerline (38)). The strip may be integrally formed with an outer panel (54, 56) (similar to that which is illustrated in FIG. 21) or it may be a separate element secured or joined to a portion of an outer panel (54, 56) (similar to that which is illustrated in FIGs. 19, 20, 22 and 23). The phrase "integrally formed" is intended to indicate that the strip is not secured or joined to an outer panel (54, 56), but rather is an extension of a portion of an outer panel (54, 56). In essence, the finger placement indicator (70) described herein as a strip may also be considered as a "tab" when situated on or positioned adjacent to a portion of a surface (60, 62) of an outer panel (54, 56) of a folded changing pad (58).

Although previously described herein as a strip, one of skill in the art will readily appreciate that suitable finger placement indicators (70) may also come in a number of alternative configurations. The dimensions of any such material used as a finger placement indicator (70) are limited only by the stress-strain properties of the material(s). Desirably any material used as a finger placement indicator (70) is similar to the material(s) used in an outer panel (54, 56). Due to the variety of

materials that may be used in such a finger placement indicator (70), however, the method of joining or securing such a finger placement indicator to a portion of an outer panel (54, 56) may vary depending on the type of material to which the finger placement indicator is being joined or secured. Consequently, the material may be joined to an outer panel (54, 56) by any of a variety of methods known to one of skill in the art. The material used as a finger placement indicator (70) is typically of dimensions sufficient to allow a consumer desirous of unfolding a folded changing pad (58) to grasp the finger placement indicator (70) between a finger and thumb of one hand and unfold the changing pad solely using that one hand if desired.

The finger placement indicator (70) may be adapted to also provide a closure means. The closure means is believed to potentially provide several benefits, including; (i) preventing a folded changing pad from prematurely unfolding; (ii) allowing a user to refold a used, but unsoiled changing pad and prevent it from reopening previous to a second or subsequent use; (iii) assisting in preventing a folded changing pad from unfolding after it has been used, soiled and wrapped for disposal; (iv) providing a user with a means of containing a soiled absorbent product, a wiping product and/or other soiled items in a tight, odor containing package that can be easily and conveniently disposed.

The closure means may be a pressure sensitive adhesive, a mechanical fastener, a cohesive fastener, or other suitable means as known in the art. The closure means may be designed to effectively engage at least a portion of the initially upper surface (32) or and/or effectively engage at least a portion of the initially lower surface (34).

Although the finger placement indicator (70) is described herein as being adapted to also provide a closure means, one of skill in the art will readily recognize that the closure means may be provided separately from the finger placement indicator (70).

Test Methods

Thickness: The thickness of the absorbent article is determined at a pressure of 0.2 psi (1.4 kPa) using a platen that is 3 inches (7.6 cm) in diameter. Testing equipment should be located in, and samples conditioned to, an atmosphere of $23 \pm 2^\circ$ C and $50 \pm 2\%$ relative humidity. The absorbent article is tested after being conditioned to the test conditions for a minimum of 24 hours. The thickness is reported to the nearest 0.01 mm for each sample, and the average of three samples is used as the thickness of the absorbent article.

Drape Stiffness: Drape Stiffness is tested using ASTM Standard Test D 1388 “Stiffness of Fabrics.” The specimen size for this test is modified from 1” x 6” (2.54cm x 15.24 cm) to 1” by 8” (2.5 cm x 20.3 cm). Otherwise, the test method outlined in ASTM D 1388 is followed. A summary of the test method follows.

The test determines the bending length of an absorbent article or fabric, using the principle of cantilever bending of the specimen under its own weight. This method measures the drape stiffness or resistance to bending of the specimen. The bending length is a measure of the interaction between specimen weight and specimen stiffness as shown by the way in which a specimen bends under its own weight. This is a reflection of the stiffness of the specimen when bent in one plane under the force of gravity.

The 1” x 8” (2.5 cm x 20.3 cm) specimen is slid, at 4 ¾ in. per minute (12.1 cm/min), in a direction parallel to its long dimension, so that its leading edge projects from the edge of a horizontal surface. The length of the overhang is measured when the tip of the specimen is depressed under its own weight to the point where the line joining the tip to the edge of the platform makes a 41.5° angle with the horizontal. The longer the overhang the slower the specimen was to bend; thus, higher numbers indicate a stiffer specimen.

The following apparatus and materials, or their equivalents, are utilized: FRL-Cantilever Bending Tester, Model 79-10 available from Testing Machines Inc, Amityville, New York, USA; Cutting Press with 1” x 8” (2.5 cm x 20.3 cm) rectangular cutting die.

The specimen should be prepared as follows: testing equipment should be located in, and samples conditioned to, an atmosphere of 23 ±2° C and 50 ± 2% relative humidity. Handling of the specimens should be minimized to avoid getting oil, grease, water, etc. on them, which would bias the test results. In particular, avoid touching the surface of the specimens. For whole products the longest dimension of the product was considered the machine direction (MD), the shorter dimension of the product was considered the cross machine direction (CD). Specimens should be evenly spaced across the cross directional width of the sample. Cut 5 specimens in each of the machine and cross directions from each sample; *i.e.*, a total of 10

specimens are tested for each sample. Specimens should be cut from areas free of folds when possible.

The specimens should be tested as follows: calibrate the test equipment according to the manufacture's directions prior to testing the specimens. After lifting
 5 the movable slide up, place the specimen on the stationary table with the coated side up. The length of the specimen should be parallel to the edge of the table. The edge of the specimen should be aligned with the line scribed ¼" from the right hand edge of the table. Lower the movable slide back onto the stationary table being careful not to move the specimen. Verify that the bend angle indicator is at the 41.5° angle
 10 marked on the scale. Turn the On/Off switch ON. Watch the leading edge of the specimen closely. Turn the switch OFF when the edge of the specimen touches the knife-edge. Read and record the overhang length from the linear scale. Test remaining specimens following the foregoing method.

The results of the test are reported as follows: report the bending length
 15 recorded for each individual specimen. Specimens cut MD and CD are considered different and their results should be reported separately. Calculate the average of the bending length for the five specimens in each direction. This is the absorbent article bending length for that direction. Calculate the drape stiffness of the absorbent article in each direction according to the following equation:

20

$$\text{Drape Stiffness (cm)} = \frac{\text{bending length (cm)}}{2}$$

2

As various changes could be made in the foregoing methods of folding
 25 protective cover articles (30) without departing from the scope of the invention, it is intended that all matter contained in the above description and shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.